

## **METHODS OF FORMING ALTERNATING PHASE SHIFT MASKS HAVING IMPROVED PHASE-SHIFT TOLERANCE**

### **Abstract of the Disclosure**

Methods for fabricating alternating phase shift masks or reticles used in semiconductor optical lithography systems. The methods generally include forming a layer of phase shift mask material on a handle substrate and patterning the layer to define recessed phase shift windows. The patterned layer is transferred from the handle wafer to  
5 a mask blank. The depth of the phase shift windows is determined by the thickness of the layer of phase shift mask material and is independent of the patterning process. In particular, the depth of the phase shift windows is not dependent upon the etch rate uniformity of an etch process across a surface of a mask blank.